

What is claimed:

1 1. A fiber-coupled optical component housing comprising a substrate
2 having an optical component mount aperture formed therein and a substantially planar
3 fiber mount region adjacent to the optical component mount aperture.

1 2. A fiber-coupled optical component housing according to claim 1,
2 further comprising a metallic fiber mount pad formed on the substantially planar fiber
3 mount region.

1 3. A fiber-coupled optical component housing according to claim 1,
2 further comprising one or more electrical contacts formed on the housing.

1 4. A fiber-coupled optical component housing according to claim 1,
2 further comprising means for mounting a lid on the housing.

1 5. A fiber-coupled optical component housing according to claim 1,
2 wherein the substrate includes at least an aluminum oxide ceramic.

1 6. A fiber-coupled optical component housing according to claim 1,
2 wherein the housing is mounted on a high thermal conductivity base.

1 7. A fiber-coupled optical component housing according to claim 6,
2 wherein an optical component is secured to the base within an area defined by the optical
3 component mount aperture.

1 8. A fiber-coupled optical component housing according to claim 7,
2 wherein an optical fiber is secured on the substantially planar fiber mountable region to
3 optically couple the fiber and the optical component.

1 9. A fiber-coupled optical component package comprising:
2 a high thermal conductivity base;

- 14 -

3 a fiber-coupled optical component housing joined to a surface of the base
4 and including:

5 a substrate having an optical component mount aperture formed
6 therein and a substantially planar fiber mount region adjacent to the optical
7 component mount aperture, and

8 means for mounting a lid on the housing.

1 10. A fiber-coupled optical component package according to claim 9,
2 further comprising a metallic fiber mount pad formed on the substantially planar fiber
3 mount region.

1 11. A fiber-coupled optical component package according to claim 9,
2 wherein the means for mounting a lid on the housing comprises a metallized seal ring
3 formed on a surface of the housing.

1 12. A fiber-coupled optical component package according to claim 9,
2 further comprising an optical component coupled to the base within an area defined by the
3 optical component mount aperture.

1 13. A fiber-coupled optical component package according to claim 12,
2 further comprising an optical fiber coupled to the substantially planar fiber mount region to
3 optically couple the fiber to an output coupler of the optical component.

1 14. A fiber-coupled optical component package according to claim 13,
2 further comprising a package lid placed over one or more of the housing, the optical
3 component, and a portion of the fiber.

1 15. The fiber-coupled optical component package according to claim 14,
2 wherein the lid is secured to the housing by at least one of an epoxy and a solder.

- 15 -

1 16. The fiber-coupled optical component package according to claim 14,
2 further comprising a fiber sealant applied at gaps between the fiber and one or more of
3 the base, the lid, and the housing.

1 17. The fiber-coupled optical component package according to claim 16,
2 wherein the fiber sealant is selected from a group consisting of an epoxy, a solder, and a
3 silicone.

1 18. A method for forming a fiber-coupled optical component package,
2 comprising the steps of:

- 3 a) providing a package base having a high thermal conductivity;
- 4 b) forming a ceramic housing having an optical component mount
5 aperture;
- 6 c) securing the ceramic housing to the base; and
- 7 d) designating a substantially planar fiber mount region on a surface of
8 the ceramic housing adjacent to the optical component mount
9 aperture.

1 19. A method according to claim 18, further comprising the steps of:

- 2 e) securing an optical component to the base within an area defined by
3 the optical component mountable aperture;
- 4 f) coupling an optical fiber to the substantially planar fiber mount
5 region to optically couple the fiber and an output coupler of the
6 optical component.

1 20. A method according to claim 19, wherein a non-metallized optical
2 fiber is coupled directly to the substantially planar fiber mount region with at least a glass
3 solder.

- 16 -

1 21. A method according to claim 19, further including the step of forming
2 a metallic fiber mount pad on the substantially planar fiber mount region to which a
3 metallized optical fiber is to be coupled with a metallic solder.

1 22. A method according to claim 19, further comprising the steps of:

2 g) placing a package lid over one or more of the housing, the optical
3 component, and a portion of the fiber; and

4 h) securing the package lid to at least the housing.

1 23. The method according to claim 22, wherein the package lid is
2 secured to at least the housing by applying at least one of an epoxy and a solder between
3 the lid and the housing.

1 24. The method according to claim 22, further comprising the step of:

2 g) sealing the fiber by filling gaps between the fiber and one or more of
3 the package base, the package lid, and the package housing.

1 25. The method according to claim 24, wherein the gaps are filled with at
2 least one of an epoxy, a solder, and a silicone.